

Claims:

1. (Previously presented) A surgical drain for sensing a physiological property of tissue and draining fluid from a body comprising:

- a) an elongated conduit configured to be implanted in a patient's body and rest against a first tissue and a second tissue within the body to drain fluid from the patient's body, wherein the elongated conduit comprises a drain portion having openings spaced along substantially the length of the drain portion;
- b) a first sensing element configured to sense a physiological property of the first tissue adjacent to a first location of the elongated conduit; and
- c) a second sensing element configured to sense the same physiological property of the second tissue adjacent to a second location of the elongated conduit different than the first location.

2. (Original) The surgical drain of claim 1, wherein the physiological property is selected from the group comprising: temperature, oxygenation, perfusion, pH, NADH levels, biochemical composition, drug concentrations, turgidity or pressure.

3. (Previously presented) The surgical drain of claim 1, further including at least one transmitting element configured to deliver energy to the first tissue and the second tissue located proximate to the first and second locations.

4. (Previously presented) The surgical drain of claim 1, comprising a third sensing element configured to sense a second physiological property of tissue

proximate to the conduit that is different from the physiological property sensed by the first and second sensing elements.

5. (Cancelled).

6. (Previously presented) The surgical drain of claim 1, wherein at least portions of the first and second sensing elements are embedded within the conduit behind material that is optically transparent.

7. (Previously presented) The surgical drain of claim 1, further including a processing system in communication with the first and second sensing elements configured to compare a difference between the physiological property sensed by the first and second sensing elements.

8. (Previously presented) The surgical drain of claim 7, wherein the sensing elements sense oxygenation and wherein the processing system is configured to compare the difference between the oxygenation sensed by the first and second sensing elements.

9. (Previously presented) The surgical drain of claim 7, wherein said processing system further including a display configured to depict data corresponding to the physiological property sensed by the first or second sensing elements.

10. (Previously presented) The surgical drain of claim 1, wherein the conduit further comprises a third sensing element configured to sense the same physiological property of tissue adjacent to a third location of the elongated conduit different from the

first and second locations; and a fourth sensing element configured to sense the same physiological property of tissue adjacent to a fourth location of the elongated conduit different from the first, second and third locations.

11. (Previously presented) The surgical drain of claim 10, further including a processing system configured to compare a difference between the physiological property sensed by the first, the second, the third and the fourth sensing elements.

12. (Previously presented) The surgical drain of claim 1, wherein the first and second sensing elements include optical fibers.

13. (Previously presented) The surgical drain of claim 1, wherein the first sensing element includes a component that is affixed to the conduit.

14. (Previously presented) The surgical drain of claim 13, wherein the component is embedded in the conduit.

15. (Previously presented) The surgical drain of claim 13, wherein the component includes a sensor.

16. (Previously presented) The surgical drain of claim 13, wherein the component includes an optical fiber.

17. (Cancelled).

18. (Cancelled).

19. (Cancelled).

20. (Cancelled).

21. (Previously presented) The surgical drain of claim 1, wherein the first tissue and the second tissue are part of the same organ.

22. (Previously presented) The surgical drain of claim 1, wherein the first tissue and the second tissue are not part of the same organ.

23. (Withdrawn) The surgical drain of claim 1, wherein the first sensing element and the second sensing element are located on the same surface of the elongated conduit.

24. (Withdrawn) The surgical drain of claim 1, wherein the first sensing element and the second sensing element are located on substantially opposing surfaces of the elongated conduit.

25. (New) A surgical drain for sensing a physiological property of tissue and draining fluid from a body comprising:

- a) an elongated conduit configured to be implanted in a patient's body in proximity to an organ at a first location and to a tissue that is not part of the organ at a second location that is different from the first location, the elongated conduit having a drain portion with openings spaced along substantially its length and configured to drain fluid from the patient's body in the vicinity of the organ and the tissue;

- b) a first sensing element coupled to the elongated conduit and configured to sense a physiological property of the organ; and
- c) a second sensing element coupled to the elongated conduit and configured to separately sense the same physiological property of the tissue.

26. (New) The surgical drain of claim 25, further comprising a processing system configured to compare the physiological property sensed by the first sensing element with the physiological property sensed by the second sensing element.